REMARKS/ARGUMENTS

As required by the Examiner in the March 20, 2006 official communication, the cited references are discussed, as follows:

1. The Boulter secondary reference, Patent No. 2,144,869, discloses a rotary jar apparatus for retrieving objects from a well bore. Upper and lower members 2 and 1 telescope together as seen in Figures 1 and 2, thereby storing energy within spring ring 28 which displaces the hammer 24 from anvil 23 to provide a jarring action. An axial passageway passes through the entire tool for circulation of drilling fluid therethrough. No mention of provision of an electrical conductor through the passageway 17 is found in this reference.

2. The Taylor, secondary reference, 4,844,157, teaches a jar accelerator 11 having a body 12 and tubular mandrel 13 for use in a drill string wherein drilling fluid can flow through the mandrel in series relationship respective the drill string. There are no electronics associated with these teachings, thus there is no mention in Taylor of solving the problems associated with electronically connecting an instrument package, or the like, to a jar tool and running an electrical conductor from the instrument package, uphole through the axis of a jar tool mandrel. Therefore, this reference does not appear to anticipate the claims at bar, each of which recite novel subject matter directed to the provision of accommodating the slack in an axial conductor required to allow reciprocation of the coacting hammer and anvil parts of a jar tool.

3. Anderson et al, Patent Number 4,846,273, a secondary reference, discloses a jar tool J for use downhole in a borehole and having an outer member 17 and inner member 18. In Figures 3 and 4, the inner member is hollow and removably affixed to pipe string S. There is no mention in Anderson et al of the problems associated with releasably connecting an instrument package, or the like, to a jar tool and running an electrical conductor from the nonexistent instrument package uphole through the axis of a jar tool mandrel.
Therefore, this reference also appears to be non-anticipatory art as regards the present Madden disclosure and claimed subject matter.

4. Taylor, Patent No. 4,919,219, a secondary reference, discloses a jar tool having a hammer 20, anvil 22, and a spline connection 32, 33, 34 which serves as a "lost motion coupling" responsive to the range of travel of the hammer and anvil. The jar tool central mandrel is hollow and extends from drill string 12 down to apparatus 14 that is considered a "fish". A latching lug 18 determines the distance of the pre-release movement and the compressional force imparted into release spring 16. The release spring 16 is related to the impact force of the hammer against the anvil.
There is no instrument package associated with the jar tool nor is there found a conductor that extends through the jar tool into communication with an instrument package.

5. Taylor, No. 5,069,282, is a secondary reference, to a downhole jar tool for installing coil tubing in a borehole. The jar tool has upper and lower mandrels 44 and 46 that telescope

together by spline connection 180, 184. Axial passageway 170 extends through the upper and lower mandrels, upper and lower anvil caps 28, 30 to provide inwardly directed force transmission shoulders 36, 38 for impact by hammers 40, 442. Hence, there are upper and lower sets of hammers and anvils for developing either an upward or a downwardly jarring action. There is no instrument package associated with the jar tool nor is there found a conductor that extends through the jar tool into communication with an instrument package.

6. Evans, Patent No. 6,481,495, a secondary reference, discloses a jar tool 10 for axial jarring of a downhole string. The tool includes inner tubular mandrel 12 telescopingly supported within outer tubular housing 14. The mandrel 12 has a longitudinal bore 24 through the entire length thereof within which a single conductor rod 28 is positioned in bore 24 and insulated from mandrel 12 and housing 14 by sleeve 30. Thus, as seen in Figure 1E, an electrical path is realized between the ends of telescoping rod segments 32, 36 and is maintained by biasing member 38.

As seen in the embodiment of Figures 11A - 11D, multiple conductors 366 extend through sleeve 30 and terminate at connector members 374 and 380. The upper end of mandrel 12 is affixed to female box connector 364 that reciprocates mandrel 12 respective housing 14.

The lower end 18 of mandrel 12 terminates above a coiled conductor 388 found immediately above member 368.

Accordingly, telescoping or reciprocal motion of the mandrel respective the lower housing shortens and elongates the tool each jarring operation. The conductors 362 are shown

affixed to the opposed connectors 374, 380 as the only support means. The coiled conductor 388 must therefore compensate for the stroke of the hammer respective the anvil to allow for the change in the measured distance between the opposed connectors 374, 380.

7. Stoesz, Patent No. 6,502,638 B1, is a secondary reference that discloses a method for removing stuck tools, or a string of pipe, from slanted boreholes by placing vibratory devices, 36 of Figure 2, in the string to provide an overall force from the surface downhole to the jar tool attached to the fish. As disclosed in Figures 3 and 4, the vibrator 36 seats at 118 as flow pushes down valve 115. Piston 120 moves upward and valve 115 separate to break the seal between the valve and seat, whereupon spring 133 moves the valve upwardly, causing piston 120 to strike surface 136 of tool body 111 resulting in uphole jar action.

There appears to be a solid valve-like device (no number) captured within the axial passageway of sectioned central mandrel of the device 36, hence, no provision of an electrical conductor situated along the longitudinal passageway would be taught therein. Accordingly, Applicant's claims at bar are not anticipated by this reference.

8. The Evans Publication, 2005/0092495 A1, is a secondary reference that discloses a jar device 10 having a mandrel 12 within housing 14. Bore 16 extends the length of mandrel 12 for receiving conductor rod 20 electrically insulated from mandrel 12 and the housing 14 by insulation sleeve 22 extending through bore 16 to well head 24. Release collet 58 engage grooves 62

configured to mesh with flanges 60 of the collet 58. Hammer 50 impacts against anvil 48 to provide a jarring action.

In Figures 1A - 1C, the bulkhead 24 appears to be a union in the form of a socket for interconnecting the discontinuous conductor rod 20. The conductor rod is found only in selected ones of Figures 1A - 3D. The upper end of the conductor rod 20 is seen in Figures 1A and 3A, and the rod 20 terminates as seen in Figure 3D. There are no numerals found for this lower end of the conductor. There is mention of the upper terminal end of the conductor found in Figure 3, Column 1. No discussion was found for the lower terminal end of the conductor rod 2.

No axial passageway was found extending through the jar mandrel in the remaining Figures, noting Figures 4B - 4E are located at the lower end thereof.

In Figure 3D it is speculated that the lower end of the conductor rod is in the form of telescoping members that extend into fixed relationship respective the outer housing, thus the rod end probably is insulated from the outer housing if it is to conduct current from one end to the other.

In any event, Applicant's claimed apparatus for accommodating the slack in the conduit required for reciprocal movement of a mandrel respective a hammer is not found in this reference.

9. Tillett Jr., Publication No. US-2004/0188085 A1, is a secondary reference that discloses a jarring tool adjuster having a mandrel 101, aligning collar 121, and shaft 113 which is releasably coupled to collet 105 or 115. There is nothing found in Tillett Jr. associated with the concept of an axial passageway

formed axially through a wireline actuated jar tool for transferring data from a location at the lower end of the tool string uphole to a location above the jar tool.

10. The remaining reference, McElroy, Publication No. 92494 published May 5, 2005, discloses a jar tool 100, having a biasing member, hammer 110 impacting an anvil 120 and a releasable coupling member 127, 135. A conductor 580 (seen in Figures 5A - 5D) extends axially through the biasing member 130; the releasable coupling 510, 520, 525, releases the upper mandrel 130 whereupon the spring 160 accelerates the hammer (at the upper end of 130) against the anvil 110 which forms the upper housing.

Conductor 580 of Figures 5A, 5B and 5C, 5D is shown as a coil housed within the female part 525 of the releasable coupling. This is the only illustration of an electrical conductor found in the drawings. On page 4 of the publication, there is mentioned fluid/air connectors for allowing electrical signals to pass through, and further mentions that the impact jar 100 insulates electrical connectors in the first and second tool connectors 140, 145 connected by one or more wires extending through apertures 180, which is the interior of the female releasable coupling, apparently suggesting the coiled wire 580 of Figures 5A, 5B of the drawings.

FURTHER ARGUMENTS AND REMARKS-------

Claims 13-22 remain before the Examiner. The probable allowance of Claim 11 was previously noted and appreciated and therefore the claims remaining at bar were written to include the limitations of Claim 11 that were believed to measure up to patentability.

The Claims at bar now recite that Applicant's jar tool tubing 33 (Figure 2A) has an upper end that is anchored within connector 142, which is in turn is affixed to outer main housing 49. The tubing 33 extends through the axis of the mandrel 43, releasable coupling 16, lost motion coupling 66, 68, where the opposite or lower end 33 terminates within lower housing 249, and where the lower end of the conductor 34 is arranged to provide ample slack as seen at 80, in order to accommodate undue tension during reciprocation of the tube 32 responsive to the spring action followed by reset.

Further, piston 74 isolates chamber 77 from well fluids while subjecting chamber 76 to the hydrostatic head of the well fluid.

It is respectfully submitted that the instant disclosure provides a new combination of a jar tool as set forth in the present claims, together with the recited structure for isolating the serpentine configured conductor that provides the required slack in the lower marginal end of the conductor within a chamber that also reciprocatingly receives the outlet or lower marginal terminal end of the tubing 33.

New Claim 14 depends from Claim 13 and adds further limitations thereto. ,particularly the details of the lower

housing chamber that receives the marginal end of the tubing and the slack in the conductor that is required by the length of the stroke occasioned by the reciprocation of the upper and lower housings. This claim goes on to recite that the lower terminal end of the conductor connects to apparatus supported from the lower chamber so that data is transmitted from the lower end of the jar tool, axially through the jar tool, and up to the surface by means of a wire line.

New independent Claim 15 is similar to Claim 13 and recites the details of the jar tool along with the details of the lower housing chamber that receives both the conductor surplus length as well as the lower marginal end of the tubing. The lower end of the conductor is connected to apparatus supported by the lower housing.

New dependent Claim 16 further recites details of the releasable latch means along with the relationship of the shaft (mandrel) respective the lost motion coupling, and the relationship of the hammer and anvil respective these coacting parts of the jar tool. The claim goes on to add the limitations of the chamber formed in the lower housing, the piston that is received within the chamber, and the tubing that extends through the first chamber, through the piston and into the second chamber where the conductor emerges from the tubing and is provided with a length greater than the stroke of the lost motion coupling.

Claim 17 presents limitations not found in the McElroy "494" publication. Member 120-A (impactee) of Figure 1 does not appear to be the equivalent of a closure member at the bottom of Figure 2-C. Apparently member 120 strikes the closure member (near 115 of Figure 1).

In Figure 2C, note member 120 appears to be a box extending through the closure member 110-A . Release of stored energy at spring 160 would seem to drive hammer 130 against anvil 110; at the same time "hammer" 180 impacts lower surface 110 which is part of the upper housing.

Dependent Claims 18 and 19 each broadly recite the storage of a long length of the conductor within the lower chamber, for accommodating the stroke of each jar action.

Claim 19 adds additional limitations by adding the serpentine configuration thereto.

Claim 20 is a method claim that includes the step of a chamber in the lower housing where one end of the conductor is provided with sufficient length to accommodate the reciprocation of the two housings respective one another.

Dependent Claims 21 and 22 add further limitations to Claim 20 and should be favorably considered therewith.

Favorable consideration of the remaining claims is respectfully requested.

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